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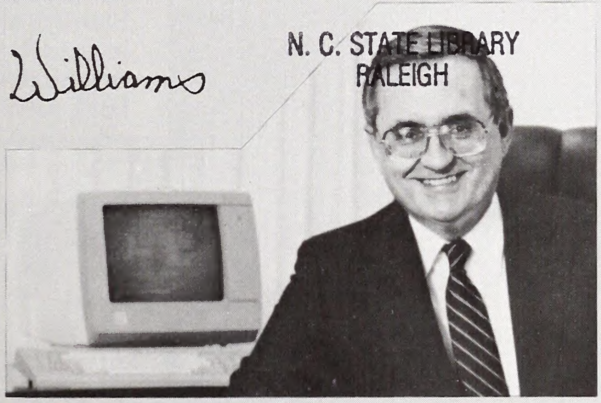
From the Desk of ...

Charlie Williams



SIPS WINS COVETED NATIONAL AWARD

State Information Processing Services has won a special national award for its initiatives in the management of information technology resources.

SIPS received the prestigious award from the National Association for State Information Systems, Inc., (NASIS). I was very proud and honored to accept this national honor for SIPS at a presentation made recently by NASIS President John Henry.

In making the official announcement, Governor Jim Martin emphasized that "this national recognition for SIPS is richly deserved. State government's excellent team of dedicated high-technology professionals have done a superb job in developing a first class center for state government that keeps North Carolina on the leading edge of electronic data processing and telecommunications."

"SIPS" is vital to North Carolina because of its leadership role in information technology throughout the state," Governor Martin added. "It is the nerve center for state government's computerized data and telecommunications systems, and is a driving force in this crucial team effort to strengthen our state's information community and improve the quality of life for all North Carolinians."

State Controler Dr. Farris Womack, SIPS' Chief Executive Officer, explained that the General Assembly created the North Carolina Computer Commission to oversee state government's rapidly growing computer industry, and ensure good planning and management.

As part of the state's high-technology blueprint for progress, State Information Processing Services was created in late 1982 to provide the strong central leadership needed to improve the cost-effectiveness and the flow of automated information to government agencies across the state.

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SIPS UPGRADES MAINFRAME COMPUTER SERVICE

SIPS' State Computer Center upgraded its central processing unit in December, 1987, by installing the IBM 3090-600E. The model 600E is considered one of the top-of-the-line computers for commercial applications. This poweful new mainframe computer features 256 million bytes of memory, 96 channels, and 6 processors.

Although the 600E has 6 separate processors it still maintains a single serial number, thus significantly reducing the cost of system software licenses. The 600E replaces the IBM 3090-400 which was previously used by SIPS.

The 3090 series is IBM's most powerful line of mainframe computers, and is used by North Carolina state government as well as many major businesses in the state.

Although both the 400 and 600E mainframes operate in a similar fashion, the 3090-600E gives SIPS the addition of 2 processors and 128 million more bytes of memory. The added power, processing speed, and overall productivity will allow SIPS to meet the increasing demand from its clients for large scale computing resources.

Individual batch jobs will now be executed slightly faster, but response time for testing and development of on-line systems will be significantly improved over the old system.

An important part of any system upgrade is the amount of down time required to make the change.

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SIPS WINS AWARD (continued from page 1)

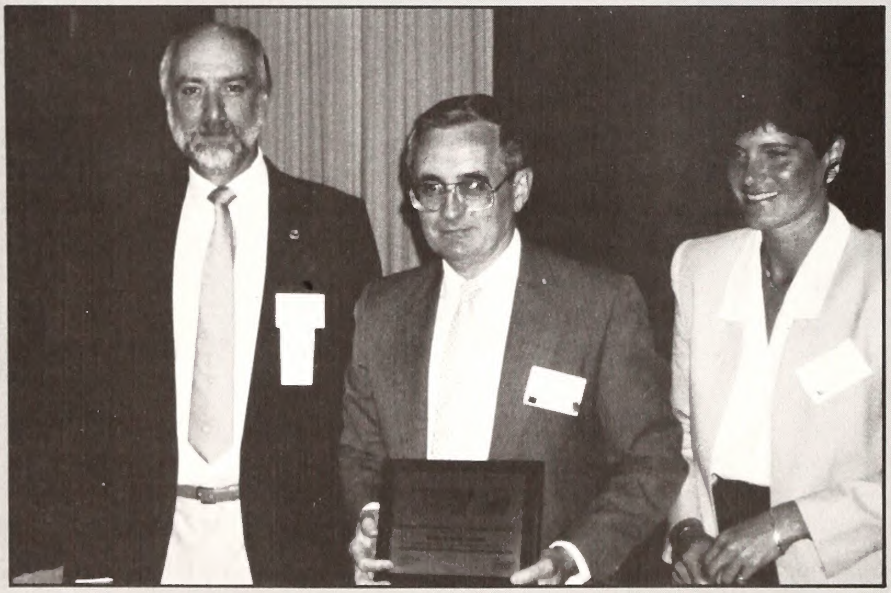
Womack pointed out that SIPS was honored with the NASIS Special Award for:

- excellence and skill in creating and developing a central high-technology facility. This merger ensures consistent statewide planning while saving tax dollars;
- raising the level of technology by sharing equipment, software, and staff resources that are beyond the financial capabilities of any single agency. This sharing of resources lowers costs and minimizes duplication to agencies served by SIPS;
- Developing a statewide digital telecommunications network for voice, data, and video transmission.

SIPS is designed to improve the quality, service, cost-effectiveness and security of North Carolina's statewide information processing system. This system includes computerized data processing, telecommunications, and automated office systems. State government has an annual investment of nearly $60 million in information processing technology.

Good management of computer and telecommunications systems is essential to the effective operation of state government. This technology requires highly skilled professionals across the state working together with a commitment to service, productivity, and security of data.

The NASIS award is proof that our government agencies are doing a superior job in using electronic data processing to better serve North Carolina through administrative, legislative, and human service programs. ■



NASIS President John Henry (left) presents SIPS Chief Charlie Williams with a special national award as Awards Coordinator Lynn Fleeger looks on.

MAINFRAME

(continued from page 1)

In this case, IBM was able to install the model 600E in less than 24 hours during the weekend so there was a minimal impact on SIPS clients.

SIPS is dedicated to continue expanding cost-effective, state-of-the-art technology into the 1990's. One of SIPS on-going goals is to estimate client computer usage and needs, and install the needed mainframe and software resources to insure a high level of productivity. The growth of the IBM 3090 computer series has allowed SIPS to accomplish this while maintaining consistent service to its clients. ■

SUPERCOMPUTER: FAST TRACK SCIENCE

The Triangle's new $18 million supercomputer, which was funded by the 1987 session of the General Assembly, will help ensure quality university research and economic development through access to leading edge super computing.

According to the legislation, sponsored by Senator Kenneth Royal (D-Durham), the two-year funding will be used for "a supercomputer that is needed both to keep North Carolina's universities in the forefront of scholarly research and training and to maintain the momentum of the State's science-based economic development."

A task force formed by the three Triangle universities (UNC -Chapel Hill, N.C. State and Duke) prepared a needs assessment study and helped lobby for the bill in the legislature.

The final decisions about the purchase, location, and operation of the supercomputer will be made by the North Carolina

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CENTER ANNOUNCES MAJOR RATE REDUCTION

SIPS' State Computer Center (SCC) has dramatically reduced the rates that will be charged to its state government customers during fiscal year 1987-88, according to Director David Thornton.

SIPS' clients can expect a 21-35 percent reduction in their SCC rates for information processing this year, he added.

Thornton also noted that one major change in the SCC billing procedures was eliminating all priority rates for jobs runs, so that charges were the same during all three shifts.

He stressed however that the actual monthly charges to client agencies will depend on the amount of information processing they use.

Ron McCoy and Ruth Milton assist terminal users having computer problems through SIPS' Network Control Help Desk. Network Control is the nerve center of the State Computer Center that includes more than 8,000 terminals in 1100 locations.

"The consolidation of SIPS into one main computer center has resulted in the sharing of expensive computer resources, an improvement in the level of technology available to all government agencies, increased data sharing, and a reduction in the overall cost to North Carolina," Thornton emphasized.

He added that about 90 percent of the total SIPS' revenue comes from the State Computer Center and the State Telecommunications Office. The new rate schedule reflects an overall reduction in rates for both of these SIPS' operations.

Thornton said that North Carolina is very cost-effective in electronic data processing and spends substantially less than the national average. A national study conducted by *Government Computer News* analyzed the percentage of the total budgets spent for information processing by federal and state governments. The averages were 1.6 percent for the federal governments, and 1.5 percent of the total budgets for state governments.

North Carolina spends less than .7 percent (less than half of the state government average) of its total budget for information processing, while other southeastern states are generally above the national average.

"This is positive proof that our productivity in information processing was accomplished through the outstanding cooperation and support of our many colleagues and clients in state government," Thornton said. "The consolidation of SIPS has proven successful in sharing rather than duplicating scarce and expensive computing resources for agencies throughout the state."

He explained that the State Computer Center operates around the clock, seven days a week. The center processes information for 44 government agencies. The heart of the system is a powerful IBM 3090-600E mainframe computer which is considered the state-of-the-art industry. The operation is supplemented by a wide variety of computer software products, and

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RATE REDUCTION (continued from page 3)

a diversity of specialized technology services.

The State Computer Center has experienced tremendous growth during the past three years. In 1984, the SCC supported about 350 computer terminals in North Carolina, while the center now serves a complex statewide network that includes more than 8,000 terminals. It provides assistance to government agencies in management, planning, and computer operations to help them use the central data files in the most effective ways to meet their automation needs. The operation of a single consolidated data center has greatly improved the accessibility and use of vital information stored on magnetic media.

The State Computer Center is totally receipts supported (paid directly for services by its clients). During the last 3 years the center billed its customers as follows: fiscal year 1984/85: $6.2 million; 1985/86: $9.1 million; and in 1986/87: $11.2 million. As a result of the increased usage, the SCC has been able to decrease most of the computer rates charged to clients.

The center provides a wide variety of software to state government clients. The software includes fourth generation compilers, data base aids, high speed data base dumps, data compressors, as well as other specialized programs such as IBM's data security system (RACF).

The State Computer Center also helps terminal users in solving their computer or communication line problems through the SIPS' Network Control Help Desk. Network Control is the nerve center of state government's on-line computer system that includes more than 8,000 terminals in 1100 locations in all 100 counties.

The SCC is operated by a team of highly skilled computer operators, systems programmers, and network coordinators who carefully monitor the state's electronic data network and mainframe computers to prevent problems, and assist clients in a professional and friendly way. It is vitally important that computer "down time" be kept to a minimum, and that all technical problems be solved as quickly and efficiently as possible. The State Computer Center handles thousands of calls for assistance each month.

SCC clients working in Raleigh can call the State Data Network for assistance at (919) 872-8841. Those outside the Triangle area can call toll-free at 1-800-722-3946. The Help Desk is open 24 hours a day. ■

DIGITAL TELEPHONE NETWORK SAVES TAX DOLLARS

North Carolina is saving an average of $13 million a year by leasing and operating its own state telephone network for long distance calling, according to Sam Rule, Director of SIPS' State Telecommunications Office.

He added that since the State Telephone Network (STN) began operation in the 1970's, it has saved state government more than $100 million in long distance rates.

Rule is also optimistic that substantial additional savings will be realized in the future.

For example, the State Telecommunications Office developed a major new digital telephone network for state government that went on-line in December, 1986. The new digital switching technology links 75,000 separate connections throughout government agencies in all 100 counties of the state.

"Digital dialing modernizes and improves telephone service to all state employees, while also saving tax dollars," Rule emphasized. "The current long distance rates in state government are the lowest in North Carolina - 12 cents a minute in-state, and 24 cents a minute for out of state calls. The state, through bulk buying, currently saves over sixty percent on

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SUPERCOMPUTER (continued from page 2)

Computer Commission. A task force appointed by Governor James Martin will assist the Computer Commission in selection of equipment and in establishing a governing board for operation of the supercomputer center.

The supercomputer will be an invaluable research tool to universities and to business and industry in the Triangle. The supercomputer will be used by university professionals including nuclear physicists, physiologists, aerospace and mechanical engineers, and physicians, as well as pharmaceutical companies such as Burrough's Wellcome and Glaxo. The Environmental Protection Agency (EPA), the Microelectronics Center of North Carolina, the North Carolina Biotechnology Center, and the Research Triangle Institute are also expected to be users of the supercomputer.

If North Carolina is chosen as the site for the nation's new $4.4 billion Superconducting Super Collider, the supercomputer would be a tremendous asset in both design and operation. For example, collider data could be sent to the supercomputer for instant analysis, and also shared with researchers from other states. ■

TELEPHONE NETWORK (continued from page 4)

intrastate calling and forty percent on interstate, based on direct distance dialing rates."

He noted that SIPS' telecommunications services are totally receipts-supported. Long distance telephone charges are billed to agencies on a flat per minute rate. Charges for local telephone service are billed by the State Telecommunications Office and include lines, instruments, maintenance, and overhead. Shared data circuit costs are prorated on a per terminal basis.

The new computerized digital telephone network features a stronger and faster signal that is more efficient, reduces noise and static, and is less costly overall. This new technology also allows the state to take advantage of new offerings such as the Integrated Services Digital Network (ISDN) which will be available in the next 2-3 years.

The State Telecommunications Office is now developing plans to expand and improve the digital telephone network by transmitting information (both voice and data) via integrated facilities. This "digital pipeline" will also add video transmission capability. The system is now being pilot tested between Raleigh and Charlotte. The more advanced digital switching system is expected to be in full operation by July, 1988.

As the need for video conferencing develops in the future, the State Telecommunications Office wil be able to offer video conferencing from desk top to desk top, from room to room, and from city to city.

The SIPS' State Telecommunications Office is responsible for overseeing and coordinating all of the voice and data telecommunications systems and services provided to state government agencies. State government is the largest user of telecommunication services in North Carolina, and therefore requires a wide array of telecommunication services.

These services include the State Telephone Network, central telephone service, two-way radio systems, as well as microwave and closed-circuit television systems.

The State Telephone Network leases facilities from Southern Bell, MCI, and U.S. Sprint, and makes these facilities available to all state and local government agencies on an actual cost basis. The network also utilizes state credit cards. The cards offer the same state telephone rates for the convenience of the field officer or other representative who does not have the convenience of his or her own phone while traveling.

A broad range of engineering and technical assistance is provided for state agencies and institutions across North Carolina. Consulting services, including planning and design for new or added telecommunications, is also offered along with billing and inventory capabilities.

The State Telecommunications Office is also responsible for maintaining the operator communications center in downtown Raleigh, which provides directory assistance, conference calling, and network call completion. ■

SIPS OFFERS NEW ELECTRONIC MAIL SERVICE

Personal Manager (PM), a new electronic mail system has been successfully pilot-tested by SIPS, and will be available to all departments of state government in the future.

SIPS' employees, as well as data processing professionals in the Department of Human Resources, have completed training courses and are currently linked to PM. During the next year, the system will be offered to all other state agencies on a voluntary basis.

Program Coordinator Patsy Ethridge explained that PM is electronically linked to Personal Services 370 (PS/370), a subsystem of Distributed Office Support System (DISOSS). DISOSS is an IBM software package which provides electronic mail and library services powered through SIPS' mainframe computer, the IBM 3090-600E.

"Through the Personal Manager function of PS/370, which offers time management and messaging for 3270-type computer terminals, SIPS will be providing state employees with an extremely efficient and cost-effective means of communication," Ethridge said. "This is vital for state government in this age of electronic

Patsy Ethridge

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NEW CARTRIDGE TECHNOLOGY: FAST TRACK TO THE FUTURE

SIPS' State Computer Center has begun a major two-year project to phase in advanced cartridge technology, according to Henry Murray and Ernie Sherrell, Computer Operations Managers.

Murray said that the new IBM 3480 Magnetic tape Subsystem, with its unique design and use of cartridges, will gradually replace the center's existing stock of sixty-five thousand 1200' and 2400' tape reels. The project began in April, 1987.

"This is another major step forward for information processing in state government," Murray emphasized. "The new cartridge system is the state-of-the-art in tape technology, and represents the wave of the future in magnetic tape processing."

Murray explained that the use of the new IBM 3480 system will provide greater performance, reliability, and productivity than the existing reel tapes. The cartridges are more compact and easier to handle. In addition, SIPS' tape reels read data at 6,250 BPI (bytes of information per inch), while the cartridges record data at approximately 38,000 bytes per inch.

"The cartridge system is faster, less expensive, more efficient, and cleaner," Sherrell stressed. "The new level of technical excellence, coupled with the simplified cartridge system design, will reduce power, cooling, and floor space requirements by as much as fifty percent."

Sherrell also noted that SIPS now has 10,000 cartridge tapes in stock, along with sixteen cartridge drives. Sixteen additional drives will be purchased by SIPS in the future.

The compact, self-threading tape drives are each equipped with their own micro-processor, which allows the tape to move at high speed while searching for a particular block of data. The micro-processor also simplifies cartridge loading by automatically threading the tape, attaching it to the take up reel, and positioning it electronically.

Sherrell pointed out that there are also other advantages to the system. Cartridges, because they are enclosed and self-contained, provide better protection from contamination and rough handling. The 3480 subsystem is further enhanced by the recording format, which provides an expanded error correction technique to reduce read/write errors.

Since the cartridge is only about one-fourth the size and weight of a conventional tape reel, SIPS anticipates savings in library storage space, offsite storage costs, and shipping expenses. ■

THE NEW CARTRIDGE SYSTEM IS THE STATE-OF-THE-ART IN TAPE TECHNOLOGY, AND REPRESENTS THE WAVE OF THE FUTURE IN MAGNETIC TAPE PROCESSING.

Photo by Wanda Daughtry

Denise Lane, Data Processing Assistant, feeds a cartridge into one of SIPS sixteen cartridge drives in the State Computer Center.

STATE SETS DESKTOP QUALITY STANDARDS

For the first time, North Carolina has established standards for desktop publishing (DTP) in state government. The new standards are based on recommendations made by the Task Force on Desktop Publishing following a six month study. The task force's final report was approved by the SIPS Advisory Board.

The task force is composed of computer professionals, end-user managers and public information officers from numerous departments within state government. Denny McGuire, one of SIPS' Office Automation Consultants, is the Coordinator of the task force.

"The future integration of desktop publishing into today's automated office will keep state government abreast of state of the art technology," McGuire said. "Desktop publishing will give office workers, managers, and data processing professionals access to faster and more productive processing and printing of information using top quality computer hardware and software."

Two personal computer software products have been adopted as state standards by the board. Ventura Publisher by Xerox was rated as the first choice, and the Pagemaker by Aldus was the second choice.

The state standards for departmental publishing are the Interleaf and NBI systems. Departmental publishing is done on a document finishing model, with various authors preparing parts of documents, and one or more people turning them into a finished product. Due to the cost and complexity of departmental publishing systems, agencies will be required to prepare bid requests.

The Advisory Board also approved the recommendation for the creation of a service bureau within the state government data network to handle publishing. Not all state agencies have the need, the finances, or the expertise to create a full time publishing section. However, they may have the need to have electronic publishing done on an occasional basis at a more reasonable charge than is currently available.

Denny McGuire

The board recommended that the task force give further study to evaluating the best location for the service bureau, as well as the staffing, funding, and training needed. Once the service bureau is established, it would be linked electronically with the State Government Printing Office and its Compugraphics typesetter.

The SIPS Advisory Board is composed of the ten largest state government customers of SIPS, plus two representatives from smaller agencies. The board meets monthly to discuss plans, projects, and policies involving information processing in North Carolina. Bill Colman, Director of Crop Statistics for the N.C. Department of Agriculture, is Chairman of the Advisory Board.

McGuire explained that desktop publishing is an extension of word processing that couples computer technology with the advanced functions of the new laser printers, producing typeset quality documents. The advanced functions of desktop publishing include the ability to mix a variety of typestyles and sizes on a page; the ability to do multiple columns; and to include graphics, line art, and photographs in the documents.

She added that desktop publishing is the newest and most important productivity tool for the personal computer. It is also big business! *Computer Daily* estimates that desktop publishing will result in a $5 billion dollar market by 1990, while *Datapro* states that electronic publishing will account for 30 to 40 percent of the growth of the entire computer industry by the end of the decade.

McGuire emphasized that electronic publishing is faster and less expensive than conventional printing methods, and that DTP is more productive for office workers and managers.

She said that quicker turnaround time is another prime advantage of desktop publishing. In addition, desktop publishing allows the author to control the output of information onto paper. This helps reduce turn around time, and also enhances the security of documents. This could be very important to state agencies involved in examinations, such as the licensing boards, as well as those agencies which produce time sensitive material.

"Desktop publishing allows the author to integrate word processing, graphics, line art, and photographs into one document through electronic cutting and pasting," she noted. "Another vital advantage of DTP is the ability to preview the final copy. The author can see exactly how a document will look on the printed page without paying for costly and time consuming typesetting, layout, and design." ■

THE FIRE'S OUT, AND SO IS THE PC

Editor's Note: The following article is reprinted by permission from the Editor of Virginia's Information Technology Bulletin published by the Department of Information Technology in Richmond.

William Gandel, of the Prince George County Department of Social Services, reminded us of a situation that can be a potential "disaster waiting to happen."

Recently, an associate of Bill's used a dry-chemical fire extinguisher to put out a small, non-electrical fire in his office area. When he returned to work, the co-worker discovered that a nearby personal computer was inoperative. Ultimately, it was determined that the chemicals used in the extinguisher had significantly damaged the computer, since these chemicals are corrosive to sensitive electronic components.

We join Bill in offering the following advice: Halon should be the fire-suppressing agent of choice for fire extinguishers which may be used in areas containing sensitive electronic components. It is safe to breathe and is non-corrosive.

If you have personal computers or other equipment containing sensitive electronics components (terminals, copiers, typewriters, etc.) in your work area, look at the extinguishers which you would use in the event of a fire. Chances are that they are either water or dry-chemical extinguishers - a potential disaster waiting to happen. While you're thinking about it, you might want to consider the probability of the same problem occurring in your own home (TV sets, stereo, microwave oven, VCR, home computer, etc.)

Bill can be contacted at the Prince George Department of Social Services. Thanks, Bill, for sharing this information with us. [Editor] ■

NEW ELECTRONIC MAIL

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information processing and high-tech communications."

She added that Personal Manager features include electronic mail; calendaring; sending and receiving telephone messages; scheduling appointments as well as agency facilities and equipment; sign in and sign out capabilities; tracking personal projects; and an on-line telephone directory of all PM Users. ■

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